
Table of Contents

Product and Measures Management Aftersales (PuMA)

Subject	Page
Introduction	3
QC Info	3
Case	3
Report	3
Measure	3
Service Information	4
Procedure	4
Creating a PuMA Case	6
Construction Groups	8
Drivetrain (Area selection Powertrain)	8
Electrical System (Area Selection Electrics/Electronics)	8
Chassis (Area Selection Chassis and Suspension)	9
Body (Area Selection Body and Trim)	9
Procedures Flowchart	10
Examples	12
Case 1	12
Case 2	14
Case 3	16
Case 4	18
Case 5	20
Case 6	22

Product and Measures Management Aftersales

OBJECTIVES

After completion of this module you will be able to:

- Understand the process that enables PuMA to be successful
- Understand the information expected in a PuMA case
- Review and understand what makes a “good” PuMA case
- Understand the different documents that can be generated from PuMA
- Understand the importance of the FASTA data transfer with respect to PuMA

Introduction

Product and Measures Management Aftersales (PuMA) is the preferred method of communicating service issues that may be encountered at the centers. As of February 2005 PuMA is the only method of first contact with the technical hotline department.

There are four major components of information utilized by PuMA. These four components are:

QC Info

Quality Control Information report (Pink Sheet) is created by the technician when informing BMWNA of a quality issue. Information included in these reports is used by the engineering department to identify and resolve product issues. Create a QC Info when a response through PuMA is not expected.

Case

Cases are created by the technician and forwarded to the Hotline. The Hotline responds to the Case with a recommendation. The Case will appear in your Mailbox with a green diamond which alerts you to the response. Only users at the center where the Case originated will be able to see and read the Case and the Hotline's response. Cases expire after 90 days.

Report

Reports are compiled by the BMW Group when similar Cases are identified. These Reports are forwarded to BMW AG and used in the problem solving process. Center personnel are not able to read Reports.

Measure

Measures are solutions or steps to be applied to a known problem. Measures are typically a response to a problem identified in a Report. To avoid duplication, and to offer technicians a single system to search for technical information, Measures are released as Service Information Bulletins as of July 2005. Service Measures released prior to July 2005 can also be searched along with Service Information Bulletins on the TIS website.

Service Information

This module is not meant to be an owner's manual for PuMA but rather explain the process behind PuMA. Technicians should already familiar with the interface used in PuMA and how to submit PuMA cases.

Procedure

The Technical Hotline was established to assist center technicians who are faced with difficult to diagnose technical problems. In order to provide proper service to all centers, the following points must be adhered to before contacting the Technical Hotline:

- The technician assigned to the vehicle must have training directly related to the vehicle or system.
- All available resources must be reviewed; these include but are not limited to: Service Information Bulletins, Service Measures, TIS, DCS messages, Service Round Table, Training manuals, Repair Manual Instructions, DIS Functional Descriptions. Refer to attached Technical Protocol for more details.
- Required checks must be performed. For example, diagnostic test plans, verifying circuit integrity, power and grounds, and reviewing vehicle service history. Refer to attached Technical Protocol for more details.
- The Shop Foreman / Team Leader must be consulted.
- Do not contact Technical Hotline if vehicle is not in shop/on property and has not been evaluated using diagnostic equipment (DIS/GT1).
- Your diagnostic tester must have FASTA switched on in order to aid the Technical Hotline Specialist in diagnosis. For more information on FASTA, refer to SI B07 07 01.
- Do not contact the Technical Hotline for Warranty approval (other than for automatic transmission replacement). Contact your Market Team where required by the Warranty Policies & Procedures Manual.
- Do not contact the Technical Hotline for Parts information. The Parts Consultant Group should be contacted by your Parts department at (800) 272-0202.
- Do not contact the Technical Hotline for radio security codes. You can obtain the security codes through DCS or faxing in your request to 201 930 8424 as per SI B65 05 99.
- If you wish to inform us of a quality issue, and no technical assistance is required, please utilize PuMA to submit a QC Info (Pink Sheet).

Note: PuMA cases not fulfilling the following rules will be rejected and returned without processing.

Once a PuMA case is submitted, it is routed to one of the three departments that perform the role of technical hotline. The three departments are :

- Electrical
- Chassis
- Drivetrain

These three departments are comprised of only eleven technical hotline specialists. Each month, they handle approximately 6,100 PuMA cases.

A technical hotline specialist is responsible for reading the cases submitted by technicians and responding in an educated and timely fashion.

Not all of the roughly 6,100 cases submitted have the same priority. The cases first read are those that “tagged” by the technicians as urgent. Others are read in the order they arrived in.

It is imperative that the cases submitted are directed to the proper department, otherwise delays will definitely result.

Example: *A technician submits a case on an A/C concern and refers it to the Chassis department. It is case number 70 for the day (for that department).*

When the Chassis department gets that report, if it is not an urgent case, it has to wait until all cases received before it are answered. The technical hotline specialist might not get to the complaint in several hours until it is noticed that the case should have gone to the Electrical department.

The case now has to get forwarded to the Electrical where it will have to wait in line in the order it arrived (might be case number 200 for the day).

A report is created on all cases that are related. These reports are analyzed by the engineering staff in the United States and then forwarded to their colleagues in Germany.

Creating a PuMA Case

After exhausting all available resources, please ensure that all cases contain the following information before submitting a case:

- A full detailed description of the complaint and whether or not the complaint has been verified.
- A detailed description of the operating conditions, environment, road conditions, anything related to the complaint or conditions under which it can be duplicated. The details must be sufficient to insure that the person reading your case will be able to understand the situation and or duplicate it if necessary.
- Identify any work previously performed during each service visit, for the same complaint.
- Results of tests performed, i.e. fuel pressure, fuel mixture adaptations, resistance values. Always provide specific readings, statements such as “in spec” and “good” are not adequate.
- When creating a case regarding Automatic Transmissions, please include “GM” or “ZF” in the subject line and the serial number of the installed transmission, in the “Work Performed” field of your case. Also include the transmission fluid level and condition. If the problem concerns shift characteristics, include the specific shift (i.e. 1-2 or 5-4) that is causing the complaint.
- Where fault codes are stored, include the name of the module concerned in “problem description” and the actual fault codes in the “fault code” box.

NOTES

PAGE

Construction Groups

Below you will find a list of construction groups covered by each of the Technical Hotline groups. Please use this list when creating your case to select the proper Hotline group "Area". An incorrect Area selection will lead to delays in processing your case.

Drivetrain (Area selection Powertrain)

- 11 Engine
- 12 Engine Electrical including DME, cruise control, starting and charging systems
- 13 Fuel Systems
- 16 Fuel Supply Systems including tank senders
- 17 Cooling Systems
- 18 Exhaust Systems
- 21 Clutch
- 22 Engine and Transmission Mounts
- 23 Manual Transmission including SMG
- 24 Automatic Transmission including EGS and AGS
- 25 Gear Shift Mechanism
- 26 Drive Shaft
- 27 Intermediate and Special Transmission
- 33 Rear Axle Differential and Output Shafts

Electrical System (Area Selection Electrics/Electronics)

- 09 Coding and Car Key Memory
- 61 General Electrical Systems including EWS, Central Locking and Power Windows
- 62 Instruments
- 63 Lights
- 64 Heating and A/C
- 65 Sound Systems, Alarms, Monitors, PDC
- 66 Remote Control Systems
- 72 Safety Restraint Systems
- 84 Phones, Navigation Systems

Chassis (Area Selection Chassis and Suspension)

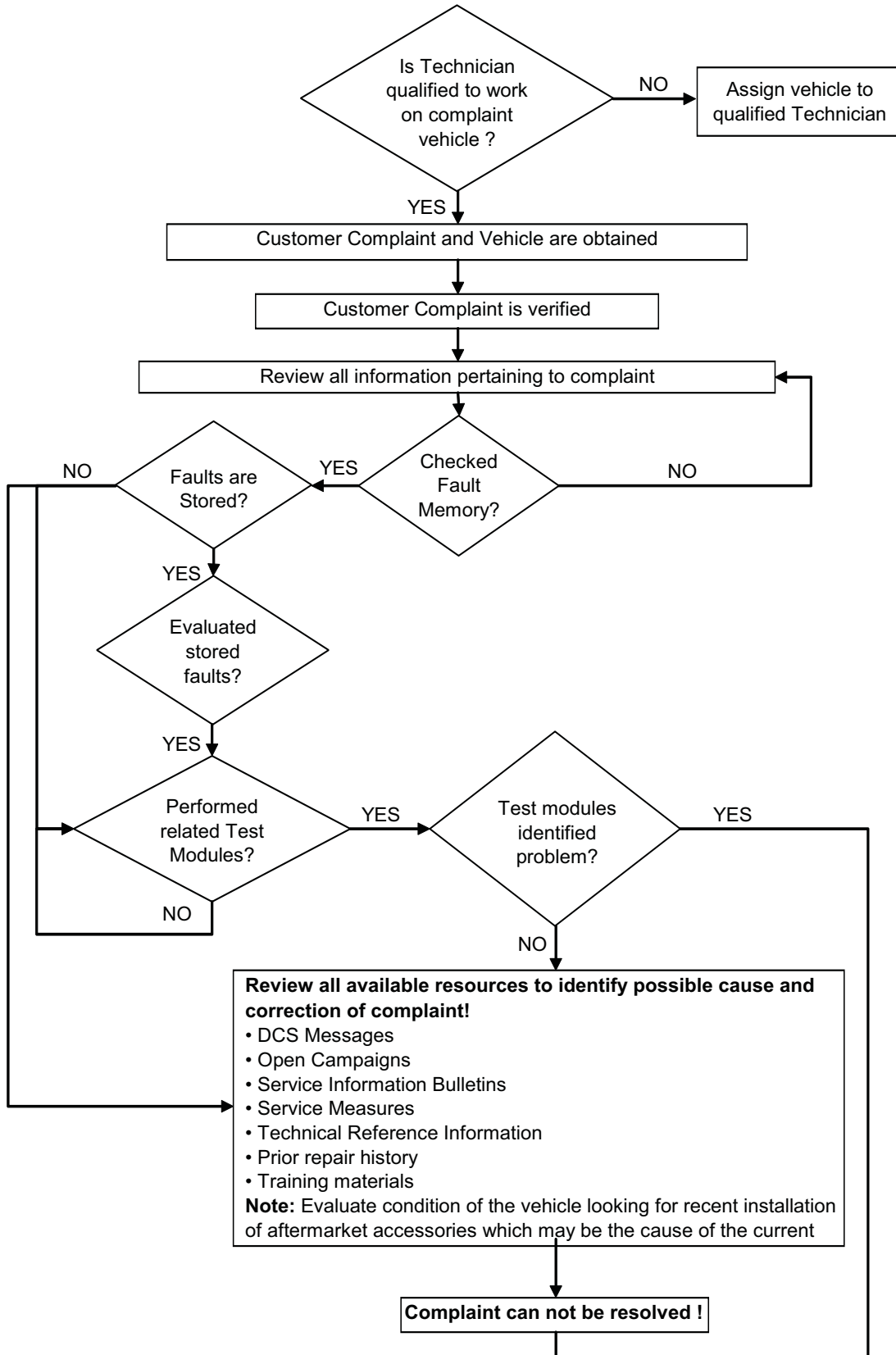
- 31 Front Axle
- 32 Steering and Wheel Alignment including Servotronic and steering column
- 33 Rear Axle excluding differential and output shafts
- 34 Brakes and Stability Control Systems including ABS, ASC+T, DSC and DTC
- 35 Pedals
- 36 Wheels and Tires including flat tire monitoring system
- 37 Special Suspension Systems such as EDC and EHC

Body (Area Selection Body and Trim)

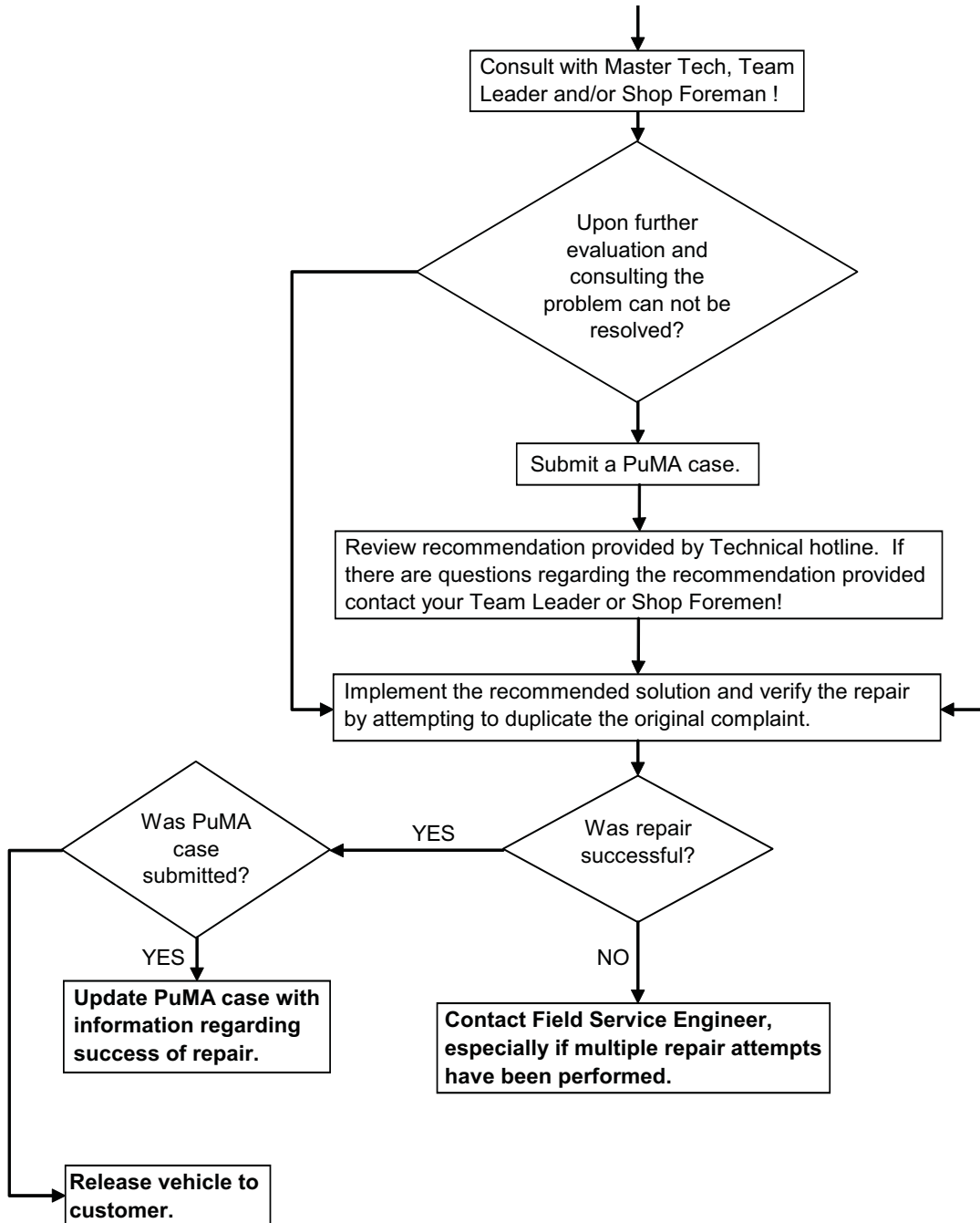
- 41 Body
- 51 Body Equipment including mirrors and doors
- 52 Seats including fitted electrical components
- 54 Special Roofs including sunroof and convertible top with fitted electrical components
- 97 Corrosion Protection
- 99 Paint Work

Note: Laminated cards reflecting the technical groups and their subjects was sent out free of charge to all centers to the attention of the BMW Service Manager. Additional copies may be ordered under SD92-201 through BMW TIS website as per SI B10 02 02.

Procedures Flowchart



Procedures Flowchart (continued)



Examples

Case 1

Case additions

Case no. 1234567	Subject X5 3.0 LOW OIL LIGHT ON	
Status date 01/02/05	Status In process by tech. Office	Date created 01/01/05
Dealer 123456, BMW of Place	Organization US, CAR	
Reporter Technician Case 1	Phone no. / Availability (from/to) 5551234567	

VIN no. (last 7 digits) AB12345	Vehicle identification no. 1ABCD123E4FG56789	Details FBM
E series E53	Engine M54	Production date 12/4/02
Gearbox AUT	Model X5 3.0i	First registration 10/6/03
Country version USA	Body GEFZG	Steering LL
Engine number 28695210	Gearbox number 0752172RXU	
Mileage 24208 mls	Workshop visits 2	

Fault

Fault location Drive, Engine	Nature of fault Fails to operate, Switch-off	Condition Engine operation, Engine off
--	--	--

Defect

Main group
12 Engine Electrical System

Subgroup
61 Oil pressure, oil temperature, oil level indicator

Location
00 Thermal oil level sensor (TOENS)

Defect Code
1261001400

Defect text
Thermal oil level sensor (TOENS) occasional malfunction

Module
40-44

Area
Electrics/Electronics

Fault code

Measure performed

Case 1 (continued)

Measure no.	Subject
<hr/>	
Customer complaint (in customer's own words) CHECK ENG OIL LEVEL MESSAGE COMES ON WHEN TURNING OFF CAR	
<hr/>	
Workshop fault description and presumed cause INCORRECT SIGNAL FROM OIL LEVEL SENSOR. PERFORMED SHORT TEST NO FAULTS IN DME	
<hr/>	
Work performed REPLACED OIL LEVEL SENSOR	
<hr/>	
Work performed effective No	Tester diagnosis performed Yes
Urgency Reply requested	

Released Measure

Measure no.	Subject
<hr/>	
Assigned report 7654321	Subject Technical - Unjustified Case
<input type="button" value="View"/>	

Previous recommendations/queries/additional information
Additional information 01/02/05 9:44 AM EST Technical Hotline Specialist
This is covered in SI B 11 07 03.

New Additional information

Vehicle return		
From 123456, BMW of Place	To	Date
Tech. Office ref. case No	Ref. case AG No	Keep defective part No

Internal note

Case 2

Case additions

Case no. 1234567	Subject grinding/clcking noise from transmissin	
Status date 01/02/05	Status In process by tech. Office	Date created 01/01/05
Dealer 123456, BMW of Place	Organization US, CAR	
Reporter Technician Case 2	Phone no. / Availability (from/to) (555) 123-4567	

VIN no. (last 7 digits)

AB12345

Vehicle identification no.

1ABCD123E4FG56789

[Details](#)

[FBM](#)

E series

R50

Engine

W10

Production date

9/21/02

Gearbox

MECH

Model

COOPER

First registration

10/28/02

Country version

USA

Body

COUPE

Steering

LL

Engine number

D366Q228

Gearbox number

2076354PNA

Mileage

32509 mls

Workshop visits

1

Fault

Fault location

Drive, Gearbox, Manual transmission

Nature of fault

Noise

Condition

Gear/driving position, In gear/driving position

Defect

Main group

23 Manual Transmission

Subgroup

00 Manual gearbox (symptom defect codes)

Location

01 Manual transmission in 1st gear

Defect Code

2300013900

Defect text

Manual transmission in 1st gear unpleasant noises

Module

47

Area

Powertrain

Fault code

Case 2 (continued)

Measure performed

Measure no. **Subject**

Customer complaint (in customer's own words)

Rattle noise while in gear

Workshop fault description and presumed cause

Clicking grinding noise while in 1st 2nd gears. Noise goes away while clutch is pushed, or in neutral. Noise is heard while driving in a straight line and or turning. Transmission creating noise.

Work performed

n/a

Work performed effective

No

Tester diagnosis performed

No

Urgency

Reply requested

Released Measure

Measure no. **Subject**

Assigned report

7654321

Subject

Technical - Unjustified Case

[View](#)

Previous recommendations/queries/additional information

Additional information 01/02/05 4:01 PM EST Technical Hotline Specialist
Please do something.
Axles OK?
Clutch OK?
See SI M00 03 02

New Additional information

Vehicle return

From

123456, BMW of Place

To

Ref. case AG

No

Date

Keep defective part

No

Case 3

Case additions

Case no. 1234567	Subject CHECK ENGINE LIGHT AND ENGINE STALLING	
Status date 01/01/05	Status In process by tech. Office	Date created 01/01/05
Dealer 123456, BMW of Place	Organization US, CAR	
Reporter Technician Case 3	Phone no. / Availability (from/to) 1ABCD123E4FG56789	

VIN no. (last 7 digits)
AB12345

Vehicle identification no.
1ABCD123E4FG56789

[Details](#)

[FBM](#)

E series
E60

Engine
N52

Production date
6/20/05

Gearbox
AUT

Model
530I

First registration
8/10/05

Country version
USA

Body
LIM

Steering
LL

Engine number
04235981

Gearbox number
0311066ZMH

Mileage
1621 mls

Workshop visits
1

Fault

Fault location
Power supply

Nature of fault
Operates incorrectly, Charging state

Condition
Time, Continuous

Defect

Main group
12 Engine Electrical System

Subgroup
31 Alternator with drive and mount

Location

Defect Code

Defect text

Module

Area
Powertrain

Fault code

Measure performed

Case 3 (continued)

Measure no.

Subject

Customer complaint (in customer's own words)

C/S vehicle stalls at stops and when it does the check engine light comes on

Workshop fault description and presumed cause

found fault stored in dme 2DED

Work performed

checked the battery and charging system with a midtronics and found system to be good

Work performed effective

No

Tester diagnosis performed

Yes

Urgency

Reply requested

Released Measure

Measure no.

Subject

Assigned report

7654321

Subject

Technical - Unjustified Case

[View](#)

Previous recommendations/queries/additional information

Additional information 9/8/05 10:31 AM EST Technical Hotline Specialist

New s/w will be available on time as the SIB states.

Additional information 9/7/05 2:07 PM EST Technician Case 3

New FASTA should now be in

Additional information 9/6/05 6:28 PM EST Technical Hotline Specialist

OK thank you they are the details that were missing. Also the most recent FASTA data is from 6/3/05.

Additional information 9/6/05 6:19 PM EST Technician Case 3

I had checked the si related directly to the fault code, it says that there is no fix for the fault at this time, I followed the rest of the sib and checked the battery and the charging system, there was nothing abnormal about it. the only fault stored in the DME the one I have put in the case, so I then consulted with my shop foreman "Junior" and he asked me to write a Puma case to see if there was more that you have learned that was not included in SI 61-06-05 or anything else that I should check that would be related to the fault. Battery and charging test is as follows 11.99v 846cca, starter test 10.62v normal charging test load off 13.53v, load on 13.47v, diode ripple normal.

Additional information 9/6/05 4:21 PM EST Technical Hotline Specialist

Follow SIB 00 04 02

New Additional information

Case 4

Case additions

Case no. 1234567	Subject fault code 026 multiplicative mixture bank 1	
Status date 01/02/05	Status In process by tech. Office	Date created 01/01/05
Dealer 123456, BMW of Place	Organization US, CAR	
Reporter Technician Case 4	Phone no. / Availability (from/to) (555) 123-4567	

VIN no. (last 7 digits) AB12345	Vehicle identification no. 1ABCD123E4FG56789	Details	FBM
E series E53	Engine M62/TU	Production date 6/23/00	
Gearbox AUT	Model X5 4.4i	First registration 7/21/00	
Country version USA	Body GEFZG	Steering LL	
Engine number 51022267	Gearbox number 0306989ZUP		
Mileage 53462 mls	Workshop visits 4		

Fault

Fault location Drive, Engine	Nature of fault Operates incorrectly, Running behavior	Condition Engine operation, Engine on
--	--	---

Defect

Main group

13 Fuel Preparation and Regulation

Subgroup

72 Air flow

Location

01 Clean air flow (after air filter)

Defect Code

1372014800

Defect text

Clean air flow (after air filter) leaking

Module

40-44

Area

Powertrain

Fault code

Measure performed

Case 4 (continued)

Measure no.	Subject
<hr/>	
Customer complaint (in customer's own words) ses light on	
<hr/>	
Workshop fault description and presumed cause tested system found fault 026 multiplicative mixture adaptation bank 1 control limit reached	
<hr/>	
Work performed injectors have been replaced intake manifold has been resealed fault seems to take around 200 miles to come back	
<hr/>	
Work performed effective No	Tester diagnosis performed Yes
Urgency Reply requested	

Released Measure

Measure no.	Subject
<hr/>	
Assigned report 7654321	Subject Technical - Unjustified Case
View	

Previous recommendations/queries/additional information
Additional information 01/01/05 12:10 PM EST Technical Hotline Specialist
Follow SIB 00 04 02

New Additional information

Vehicle return		
From 123456, BMW of Place	To	Date
Tech. Office ref. case No	Ref. case AG No	Keep defective part No

Internal note

Case 5

Case additions

Case no. 1234567	Subject no crank / no start	
Status date 01/01/05	Status In process by tech. Office	Date created 01/01/05
Dealer 123456, BMW of Place	Organization US, CAR	
Reporter Technician Case 5	Phone no. / Availability (from/to) (555) 123-4567	

VIN no. (last 7 digits) AB12345	Vehicle identification no. 1ABCD123E4FG56789	Details	FBM
E series E60	Engine M54	Production date 1/26/04	
Gearbox AUT	Model 530I	First registration 2/27/04	
Country version USA	Body LIM	Steering LL	
Engine number 34133202	Gearbox number 0072546ZDP		
Mileage 25570 mls	Workshop visits 2		

Fault

Fault location Drive, Engine	Nature of fault Fails to operate, Start	Condition Time
--	---	--------------------------

Defect

Main group 12 Engine Electrical System		
Subgroup 71 Electronic control unit		
Location 00 Control unit for electronic engine output control (EML)		
Defect Code 1271001400	Defect text Control unit for electronic engine output control (EML) occasional malfunction	
Module 40-44	Area Powertrain	Fault code

Measure performed

Case 5 (continued)

Measure no.

Subject

Customer complaint (in customer's own words)

customer reports no start/crank condition

Workshop fault description and presumed cause

see below

Work performed

last in for this concern on 8/25. complete cip update was done to rectify concern. i having the folder pulled so i can see the diag report. the diag report has only 1 fault stored in the entire vehicle.

fc #abca in m-ask-bo.

i'm waiting to hear from the customer to see if they use different keys on this car.

any tis sib's don't apply because i have no faults. i haven't duplicated the concern yet either. the car was towed in for this but started right up for me

Work performed effective

No

Tester diagnosis performed

Yes

Urgency

Reply requested

Released Measure

Measure no.

Subject

Assigned report

7654321

Subject

Technical - Unjustified Case

[View](#)

Previous recommendations/queries/additional information

Additional information 9/12/05 12:23 PM EST Technical Hotline Specialist
Follow SIB 00 04 02

New Additional information

Vehicle return

From

123456, BMW of Place

To

Ref. case AG

No

Date

Keep defective part

No

Internal note

Case 6

Case additions

Case no. 1234567	Subject CONVERTIBLE TOP STUCK.	
Status date 01/01/05	Status Recommendation approved	Date created 01/01/05
Dealer 123456, BMW of Place	Organization US, CAR	
Reporter Technician Case 6	Phone no. / Availability (from/to) (555) 123-4567	

VIN no. (last 7 digits) AB12345	Vehicle identification no. 1ABCD123E4FG56789	Details FBM
E series E46	Engine M54	Production date 1/25/02
Gearbox AUT	Model 325CI	First registration 2/28/02
Country version USA	Body CABRIO	Steering LL
Engine number 27969978	Gearbox number 0517663ZTT	
Mileage 29497 mls	Workshop visits 2	

Fault

Fault location Body, Convertible top	Nature of fault Fails to operate, Open	Condition Switched-on systems
--	--	---

Defect

Main group 54 Slide/Tilt Sunroof+Convertible Top
Subgroup 34 Convertible soft-top, motorized
Location 12 Wiring harness, convertible top/rear window defogger

Defect Code	Defect text
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Module 05.EK	Area Electrics/Electronics	Fault code
------------------------	--------------------------------------	-------------------

Measure performed

Case 6 (continued)

Measure no.

Subject

Customer complaint (in customer's own words)

THE CUSTOMER STATES THAT THE CONVERTIBLE TOP IS STUCK OPEN.

Workshop fault description and presumed cause

FOUND CONVERTIBLE TOP STUCK OPEN WHEN BRINGING VEHICLE INTO THE SHOP.

Work performed

PERFORMED DIS TEST, FOUND POWER SUPPLY TO SWITCH S142 AND S145 FAULTY. CHECKED WIRES TO SWITCHES S142, S145. FOUND WIRE GN/WS DAMAGED. I TRIED TO REPLACED THIS WIRE BUT HAVING PROBLEM RUNNING THIS WIRE. SHOULD I REPLACE THE WHOLE HARNESS TO FIX THIS PROBLEM?

Work performed effective

Yes

Tester diagnosis performed

Yes

Urgency

Reply requested

Released Measure

Measure no.

Subject

Assigned report

7654321

Subject

Technical - Unjustified Case

[View](#)

Previous recommendations/queries/additional information

Recommendation 9/12/05 10:51 AM EST Technical Hotline Specialist
WILL NOT BE PROCESSED

Case already contains effective diagnosis and repair/results

New Additional information

Vehicle return

From

BMW of Place

To

Date

Tech. Office ref. case

No

Ref. case AG

No

Keep defective part

No

Internal note